

2600 Bull Street
Columbia, SC 29201-1708

MEMORANDUM

RE: Evaluation of Safety-Kleen Systems, Inc., Lexington facility's status under the RCRA Info Corrective Action Environmental Indicator Event Code (CA725)
EPA I.D. Number: **SCD 077 995 488**

FROM: Johnny Tapia, P.E. *J.T.*
Operations Engineering Section
Waste Management Division

THRU: Rodney Wingard, Acting Manager *RW*
Operations Engineering Section
Division of Waste Management

Shelly Sherritt, Acting Assistant Director *S. Sherritt*
Waste Management Division

Henry Porter, Acting Director *H. Porter*
Waste Management Division

TO: Safety - Kleen Systems, Inc. - Lexington Project File
EPA I.D. # SCD 077 995 488
Central File # 51759

I. PURPOSE OF MEMO

This memo is written to formalize an evaluation of the status of Safety-Kleen Systems, Inc., located in Lexington, South Carolina, in relation to the *Current Human Exposures Under Control* (CA 725) corrective action event code defined in the Resource Conservation and Recovery Information System (RCRA Info). An evaluation of Safety - Kleen Systems' status in relation to the *Migration of Contaminated Groundwater Under Control* (CA 750) corrective action event code will be finalized under separate cover.

Concurrence by the Operations Engineering Section Manager and the Division of Waste Management Director is required prior to entering this event code into RCRA Info. Your concurrence with the interpretation provided in the following paragraphs and the subsequent recommendation is satisfied by dating and signing at the appropriate location within Attachment 1.

II. HISTORY OF ENVIRONMENTAL INDICATOR EVALUATIONS AT THE FACILITY AND REFERENCE DOCUMENTS

This particular evaluation is the second evaluation for Safety-Kleen Systems, Inc., Lexington facility with regard to the CA 725 corrective action event code. The previous evaluation was complete on August 31, 1998. Based on the information available at the time, a status code of "IN" indicated that more information is needed to evaluate human exposures.

III. FACILITY SUMMARY

Safety-Kleen Systems, Inc. (SKS) operates a solvent reclamation facility and processes other organic chemicals which are either returned to the customers or blended and sent to other facilities for energy recovery. Safety-Kleen Systems, Inc.'s facility is situated 10 miles west of Columbia S.C. in Lexington County at 130-A Frontage Road, Lexington, S.C. SKS renewed the Hazardous waste Permit for treatment and storage, which has an effective date of October 30, 1998. The maximum volume of hazardous waste storage in containers is 319,004 gallons and 535,000 gallons in tanks. Container storage areas 4, 12, and 13 have been clean closed. The maximum volume of hazardous waste treatment in the one tank is 35,000 gallons per day at the FRS Vat unit, which and completed closure.

There are six SWMUs and AOCs identified in Appendix A of Safety - Kleen Systems, Inc. Permit, in which these units are required to complete a RCRA facility Investigation (RFI). These units are: SWMUs 1, 13, 14, 15 & AOCs A & B. A Phase 1 and a Phase 2 RFI have been conducted to date. A Phase 2 RFI report dated May 31, 2002 revised October 25, 2002 was conditionally approved on November 25, 2002.

IV. CONCLUSION FOR CA725

Name and ID No.	Location (City or Town)	Date of Latest EI Memo	CA 725 Decision
Safety - Kleen Systems, Inc. SCD 077 995 488	Lexington, SC	August 31, 1998	"YE"

V. SUMMARY OF FOLLOW-UP ACTIONS

The Phase 2 RFI report has been conditionally approved and a risk assessment evaluation is underway to evaluate potential risk.

The *Current Human Exposure Under Control* EI determination will be updated as necessary upon the discovery of new or contrary information.

Memo to SKS-Lexington Project File

March 27, 2003

Attachment: 1. CA725: Current Human Exposures Under Control

cc: Kim Tappa, Division of Hydrogeology
Lewis Bedenbaugh, Director Central Midlands
Syed Ahmed, EPA Region IV

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**ATTACHMENT 1
DOCUMENTATION OF ENVIRONMENTAL INDICATOR DETERMINATION
RCRA Corrective Action
Environmental Indicator (EI) RCRIS Code (CA725)
Current Human Exposures Under Control**

Facility Name: Safety - Kleen Systems, Inc.
Facility Address: 130 - A Frontage Road, Lexington, SC 29073
Facility EPA ID #: SCD 077 995 488

1. Has **all** available relevant/significant information on known and reasonably suspected releases to soil, groundwater, surface water/sediments, and air, subject to RCRA Corrective Action (e.g., from Solid Waste Management Units (SWMU), Regulated Units (RU), and Areas of Concern (AOC)), been **considered** in this EI determination?

- ☒ If yes - check here and continue with #2 below,
☐ If no - re-evaluate existing data, or
☐ If data are not available skip to #6 and enter **AN** (more information needed) status code.

BACKGROUND

Definition of Environmental Indicators (for the RCRA Corrective Action)

Environmental Indicators (EI) are measures being used by the RCRA Corrective Action program to go beyond programmatic activity measures (e.g., reports received and approved, etc.) to track changes in the quality of the environment. The two EI developed to date indicate the quality of the environment in relation to current human exposures to contamination and the migration of contaminated groundwater. An EI for non-human (ecological) receptors is intended to be developed in the future.

Definition of ACurrent Human Exposures Under Control@EI

A positive ACurrent Human Exposures Under Control@EI determination (AYE@status code) indicates that there are no Aunacceptable@human exposures to Acontamination@(i.e., contaminants in concentrations in excess of appropriate risk-based levels) that can be reasonably expected under current land- and groundwater-use conditions (for all Acontamination@subject to RCRA corrective action at or from the identified facility (i.e., site-wide)).

Relationship of EI to Final Remedies

While Final remedies remain the long-term objective of the RCRA Corrective Action program the EI are near-term objectives which are currently being used as Program measures for the Government Performance and Results Act of 1993, GPRA). The ACurrent Human Exposures Under Control@EI are for reasonably expected human exposures under current land- and groundwater-use conditions ONLY, and do not consider potential future land- or groundwater-use conditions or ecological receptors. The RCRA Corrective Action program's overall mission to protect human health and the environment requires that Final remedies address these issues (i.e., potential future human exposure scenarios, future land and groundwater uses, and ecological receptors).

Duration / Applicability of EI Determinations

EI Determinations status codes should remain in RCRIS national database ONLY as long as they remain true (i.e., RCRIS status codes must be changed when the regulatory authorities become aware of contrary information).

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2. Are groundwater, soil, surface water, sediments, or air **media** known or reasonably suspected to be **contaminated**¹ above appropriately protective risk-based **levels**² (applicable promulgated standards, as well as other appropriate standards, guidelines, guidance, or criteria) from releases subject to RCRA Corrective Action (from SWMUs, RUs or AOCs)?

Media	Yes	No	?	Rationale/Key Contaminants
Groundwater	✓			PCE; cis 1,2-DCE; TCE
Air (indoors) ²			✓	Not measured
Surface Soil (e.g., <2 ft)		✓		Releases from SWMUs /AOCs are minimally present in surface soil.
Surface Water		✓		There are no surface water features at the facility.
Sediment		✓		There is no sediment to be sampled at the facility.
Subsurface Soil (e.g., >2 ft)	✓			Areas near SWMU 14/AOC A have TPH - mineral spirits in a range from 500 to 11,000 mg/Kg.
Air (outdoors)		✓		Not considered of concern.

_____ If no (for all media) - skip to #6, and enter **AYE**,³ status code after providing or citing appropriate **levels**,⁴ and referencing sufficient supporting documentation demonstrating that these **levels**⁵ are not exceeded.

_____ ✓ If yes (for any media) - continue after identifying key contaminants in each **contaminated**⁶ medium, citing appropriate **levels**⁷ (or provide an explanation for the determination that the medium could pose an unacceptable risk), and referencing supporting documentation.

_____ If unknown (for any media) - skip to #6 and enter **AN**⁸ status code.

¹ **Contamination**⁹ and **contaminated**¹⁰ describes media containing contaminants (in any form, NAPL and/or dissolved, vapors, or solids, that are subject to RCRA) in concentrations in excess of appropriately protective risk-based **levels**¹¹ (for the media, that identify risks within the acceptable risk range).

² Recent evidence (from the Colorado Dept. of Public Health and Environment, and others) suggest that unacceptable indoor air concentrations are more common in structures above groundwater with volatile contaminants than previously believed. This is a rapidly developing field and reviewers are encouraged to look to the latest guidance for the appropriate methods and scale of demonstration necessary to be reasonably certain that indoor air (in structures located above (and adjacent to) groundwater with volatile contaminants) does not present unacceptable risks.

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Rationale and Reference(s):

1. Phase 2 RFI Report (5/31/02), Revised October 25, 2002:

GROUNDWATER: samples collected as part of the phase 2 RFI report:

MW-2D: TCE = 130 ug/L, cis 1,2-DCE = 230 ug/L, PCE = 92 ug/L

TMW -1D: PCE = 68 ug/L

TMW-2D: PCE = 9.9 ug/L

TMW -4D: PCE = 78 ug/L

TMW-6D: PCE = 50 ug/L

TMW-7D: PCE = 58 ug/L

TMW-11D: PCE = 130 ug/L

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3. Are there **complete pathways** between Acontamination@and human receptors such that exposures can be reasonably expected under the current (land- and groundwater-use) conditions?

Summary Exposure Pathway Evaluation Table Potential Human Receptors (Under Current Conditions)							
AContami- nated@ Media	Residents	Workers	Day- Care	Construction	Trespassers	Recreation	Food³
Groundwater	No	No	No	No	No	No	No
Air (indoors)	No	Yes	No	No	No	No	No
Soil (surface, e.g., <2 ft)	No	No	No	No	No	No	No
Surface Water							
Sediment							
Soil (subsurface, e.g., >2 ft)	No	No	No	Yes	No	No	No
Air (outdoors)							

Instructions for Summary Exposure Pathway Evaluation Table:

- For Media which are not Acontaminated@as identified in #2, please strike-out specific Media, including Human Receptors=spaces, or enter AN/C@for not contaminated.
- Enter Ayes@or Ano@for potential Acompleteness@under each AContaminated@Media -- Human Receptor combination (Pathway).

Note: In order to focus the evaluation to the most probable combinations some potential AContaminated@Media - Human Receptor combinations (Pathways) do not have assigned spaces in the above table. While these combinations may not be probable in most situations they may be possible in some settings and should be added as necessary.

✓ If no (pathways are not complete for any contaminated media-receptor combination) - skip to #6, and enter @YE@status code, after explaining and/or referencing condition(s) in-place, whether natural or man-made, preventing a complete exposure pathway from each contaminated medium (e.g., use optional Pathway Evaluation Work Sheet to analyze major pathways).

_____ If yes (pathways are complete for any AContaminated@Media - Human Receptor

³ Indirect Pathway/Receptor (e.g., vegetables, fruits, crops, meat and dairy products, fish, shellfish, etc.)

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combination) - continue after providing supporting explanation.

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_____ If unknown (for any AContaminated@Media - Human Receptor combination) - skip to #6 and enter AN@status code

Rationale and Reference(s): _____

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- 4 Can the **exposures** from any of the complete pathways identified in #3 be reasonably expected to be **Asignificant@** (i.e., potentially **Aunacceptable@** because exposures can be reasonably expected to be: 1) greater in magnitude (intensity, frequency and/or duration) than assumed in the derivation of the acceptable **Alevels@** (used to identify the **Acontamination@**; or 2) the combination of exposure magnitude (perhaps even though low) and contaminant concentrations (which may be substantially above the acceptable **Alevels@** could result in greater than acceptable risks)?

- ✓ If no (exposures can not be reasonably expected to be significant (i.e., potentially **Aunacceptable@** for any complete exposure pathway) - skip to #6 and enter **AYE@** status code after explaining and/or referencing documentation justifying why the exposures (from each of the complete pathways) to **Acontamination@** (identified in #3) are not expected to be **Asignificant.@**
- _____ If yes (exposures could be reasonably expected to be **Asignificant@** (i.e., potentially **Aunacceptable@** for any complete exposure pathway) - continue after providing a description (of each potentially **Aunacceptable@** exposure pathway) and explaining and/or referencing documentation justifying why the exposures (from each of the remaining complete pathways) to **Acontamination@** (identified in #3) are not expected to be **Asignificant.@**
- _____ If unknown (for any complete pathway) - skip to #6 and enter **AN@** status code

Rationale and Reference(s):

- Potential Indoor exposure pathway is minimized due that structures located above the groundwater plume have permanent open door/accesses or are used by workers that are regulated under the OSHA standards.
- The potential for exposure of a construction worker to contaminated subsurface soil is minimized due to the restrictions and construction present in areas with contaminated soil. The levels present are relatively low and there is the need of notification and permission to excavate, as well as the obligatory use of personal protective equipment on-site.

4 If there is any question on whether the identified exposures are **Asignificant@** (i.e., potentially **Aunacceptable@** consult a human health Risk Assessment specialist with appropriate education, training and experience.

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5 Can the **Asignificant@exposures** (identified in #4) be shown to be within **acceptable** limits?

- _____ If yes (all **Asignificant@exposures** have been shown to be within acceptable limits) - continue and enter **AYE@**after summarizing and referencing documentation justifying why all **Asignificant@exposures** to **Acontamination@**are within acceptable limits (e.g., a site-specific Human Health Risk Assessment).
- _____ If no (there are current exposures that can be reasonably expected to be **Aunacceptable@**- continue and enter **ANO@**status code after providing a description of each potentially **Aunacceptable@exposure**.
- _____ If unknown (for any potentially **Aunacceptable@exposure**) - continue and enter **AN@**status code

Rationale and Reference(s): Skipped as per question # 4

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6. Check the appropriate RCRIS status codes for the Current Human Exposures Under Control EI event code (CA725), and obtain Supervisor (or appropriate Manager) signature and date on the EI determination below (and attach appropriate supporting documentation as well as a map of the facility):

☒ YE - Yes, "Current Human Exposures Under Control" has been verified. Based on a review of the information contained in this EI Determination, "Current Human Exposures" are expected to be "Under Control" at the Safety-Kleen Systems, Inc. facility, EPA ID # SCD 077 995 488, located at 130-A Frontage Road, Lexington, SC under current and reasonably expected conditions. This determination will be re-evaluated when the Agency/State becomes aware of significant changes at the facility.

☐ NO - "Current Human Exposures" are NOT "Under Control."

☐ IN - More information is needed to make a determination.

Completed by



Date: 3-28-03

Johnny Tapia, P.E.
Operations Engineering Section
Bureau of Land and Waste Management

Supervisor



Date: 3/28/03

Rodney Wingard, Acting Manager
Operations Engineering Section
Bureau of Land and Waste Management

Locations where References may be found.

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